

1.0 EXECUTIVE SUMMARY

Introduction:

During the 2000 legislative session, the Legislature passed Act 152. Act 152 created a watershed protection board comprised of the chairpersons of the Department of Land and Natural Resources and Department of Agriculture, the county water managers from each of the four counties, and a representative from the United States Military. The board was charged to develop a watershed master plan to include:

- (1) Identification of potential watershed management areas to be protected;
- (2) Development of criteria for eligible watershed management projects;
- (3) Development of procedures and criteria for selecting eligible watershed management projects;
- (4) Designation of watershed management projects, including the amount of funds needed for such projects;
- (5) Development of an implementation plan for those designated watershed management projects;
- (6) Identification of potential sources of funding, including appropriations, assessments, contribution, grants, donations from public and private sources, and recommendation of funding sources;

(7) Analysis of problems and issues encountered in the equitable levy, assessment, and collection of the watershed protection assessment on water users; and

(8) Any other issues designated by the board.

The board was charged to submit the watershed protection master plan to the legislature no later than June 30, 2001. Act 152 sunsets on June 30, 2002.

Background:

Hawaii's forested watersheds, both native and non-native, are vital recharge areas for Hawaii's underground aquifers and a dependable source of clean water for its streams. At the turn of this century, public and private concerns helped set-aside over 1.8 million acres of forest cover into forest reserves further protecting Hawaii's water resources. Today, Hawaii has the 11th largest State-owned forest and natural area reserve system in the United States. However, our forested watershed is declining in both area and quality, threatened by invasive weeds and feral animals. A healthy watershed forest is no accident. It is the result of the investment that was made in good watershed management many decades ago with the creation of the forest reserves and massive reforestation efforts thereafter.

Today, an integrated watershed forest management program may include all of the following activities: fire control and prevention; stream monitoring; reforestation; detection and rapid response to remove invasive weeds; monitoring for pest insects and disease; maintenance of trails and accesses for

public hunters; fencing and animal removal in priority watersheds; and public education & volunteer programs.

The concept of watershed partnerships as a means of watershed protection has been going on for close to ten years. Watershed partnerships are voluntary alliances of public and private landowners committed to the common value of protecting large areas of forested watersheds for water recharge and other values. The successful creation of the East Maui and West Maui Mountains Watershed Partnerships have reinvigorated the historic cooperative partnership of public and private sectors in working together to protect essential forested watershed recharge areas in Hawaii. In 1999, the Koolau Mountain Watershed Partnership on the island of Oahu and an East Molokai Watershed Partnership were also formed. A watershed partnership for the island of Lanai should be established this year. Nothing in this report is meant to discourage those continuing efforts underway. One of the purposes of this report was to look at the issues concerning a dedicated source of funding for current and future watershed protection projects.

Findings and Recommendations:

1. The board decided that given the huge undertaking to come up with a watershed master plan and given the limitations of time and resources that the phased approach would allow the initial report to focus in on achievable targets based on the priority identified in Act 152 of the forested recharge areas. Expanding the watershed master planning effort to include the entire Ahupua'a would be the focus of a subsequent master planning effort. Ultimately, a total of four phases have been identified, as follows:

- Phase 1 Framework for the Watershed Protection Program
- Phase 2 Watershed Assessment and Prioritization (Mauka Areas)
- Phase 3 Watershed Master plan for the Mauka Areas
- Phase 4 Watershed Master Plan for Mauka and Makai Areas (Ahupua'a).

2. A management plan must include the following components:

-watershed resource monitoring, including rainfall, aquatic biological data from streams, hydrological information, water quality, forest health and species diversity.

-feral animal control

-non-native weed control

-polluted runoff and other pollution in the watershed area

-management infrastructure, roads, trails, shelters, helicopter landing sites to do forest restoration and watershed resource monitoring work

-public education and volunteer outreach program, including a program to educate and train the public at large and communities on watershed issues. A community outreach program that includes capacity building citizen based watershed restoration and partnerships with stakeholder groups.

3. There are already five existing watershed partnerships located on East Maui, West Maui, East Molokai, Koolau mountains on Oahu, and Lanai. Those efforts should be supported with adequate funding.

4. The assessment of each watershed management project can be facilitated by the development of a set of criteria that will

identify the physical, social and cultural parameters of each watershed. There were two basic groups of criteria that could apply to watershed management projects, 1) Watershed significance criteria based on resource values or conditions that impact water quality and quantity, and 2) the ability to deliver effective watershed protection programs.

5. Criteria for eligibility should be simple and easily understood. Information submitted for the application, screening and selecting procedures should suffice to demonstrate that some or all of these criteria have been met. Projects should not have to meet every criterion, but should demonstrate sufficient eligibility to be considered. Procedures for selection of eligible watershed projects should enable sound decision-making, without creating the need for a heavy administrative structure to implement. Procedures and criteria should generate sufficient data to facilitate the weighing of the selected parameters with confidence, and yet they should do so without being unduly burdensome for the applicant or implementing board.

6. Implementing watershed protection projects is a multimillion-dollar undertaking. A multi-million dollar expense may seem like a lot of money, but an analysis of the resources at stake justifies the investment. In November 1997, a team of economists at the University of Hawaii began a natural resource valuation of the Koolau Mountains watershed on the island of Oahu. Their preliminary economic analysis of the amenities provided by the Koolau Mountains watershed show an estimated Net Present Value (NPV) of \$7.44 to \$14 billion. (Roumasset, J. et. al., 1997).

7. It is important and critical to the success of watershed projects that they be supported by a combination of funding sources including agency appropriations, grants, contributions from public and private sources, landowners, water purveyors, and other beneficiaries of watershed protection programs. As well, a dedicated source of funding, whether it is a portion of an existing tax or a new assessment or tax on water use should be considered. Funding through the general fund would be more equitable in distributing the burden of this tax on all water users in the State, however it is acknowledged that general funds are subject to changing budget priorities and are not a source of dedicated funds.

8. There was agreement that the Conveyance tax should be looked at as a source of dedicated funding for watershed management. Since 1993, two successful DLNR programs have had a dedicated permanent source of state funding: the Natural Area Partnership Program (NAPP), which provides state matching funds on a 2:1 basis with private funds for the management of natural resources on private lands permanently dedicated to conservation; and the Forest Stewardship Program (FSP), which provides State matching funds on a 1:1 basis with private funds for the forestry and forest management on private lands for ten-year periods. These programs are funded by 25% of the Conveyance Tax (HRS 247), which is levied each time real estate property is bought or sold, with revenues deposited in the Natural Area Reserve Fund. The nexus is clear for use of a portion of the Conveyance Tax as the sale, development, and improvement of real estate in Hawaii puts additional pressure on Hawaii's water resources and increases the need and costs to protect watershed recharge areas.

9. A watershed protection assessment on all water users must consider policy, legal and equitable issues. There are serious policy issues that must be addressed prior to the imposition of any assessment. Additionally, the legal issues on assessment versus taxation, equality and legal nexus of the assessment, collection of a state assessment by county agencies must be addressed prior to the imposition of any assessment. There was consensus that any assessment must be fairly applied to all water users, e.g. municipal, agricultural, military, private water systems.

10. The watershed protection assessment should be based on a completed assessment and prioritization of watershed and water resource needs and issues, and an accountability plan for expending the funds. The plan should include options to fund watershed protection activities.

In order to determine a sound basis for a watershed funding assessment for new watershed projects, a watershed protection master plan that addresses watershed identification, watershed project selection, project implementation, prioritization and should be completed before the final funding needs and assessment methods can be determined.

11. A commitment to funding watershed protection programs should be provided by all beneficiaries including government agencies, landowners, watershed partnerships and the public.

Recommendations for Follow Up Actions:

Act 152 sunsets in July 2002 and in the remaining year of this Act, there are many objectives that could be completed to base a

more thorough budgetary proposal to the legislature. But this would be subject to legislative approval for additional appropriations. The following areas comprise potential next steps for the watershed protection board. These measures would all require additional funding for the board.

1. Watershed Protection Board: The present board believes that should the Legislature desire to retain the watershed protection board and to extend its sunset date or eliminate the sunset date completely that three areas need to be considered. First, the composition of the board should be reworked to include scientific, landowners, and community members. Second, the Legislature must provide funding for additional work of the Board. The board cannot continue to function without the addition of staffing and other resources to properly get the job done. Third, one of the major functions of the board is to provide coordination between existing programs to make sure that resources are not wasted and to provide for the maximum coordination of many different existing programs.

2. Complete the List of Critical Watershed Management Areas.

3. Complete the Watershed Data Collection and Prioritization Assessment. More work is needed to focus or "distill" the criteria into their essential elements and complete the watershed assessment and prioritization process in a timely period.

4. Develop a List of Tailored Watershed Protection Projects. Once the prioritized list of critical watershed management areas are identified, a secondary assessment could evaluate the potential effectiveness of each type of watershed protection

project that would be specifically tailored to the unique needs of each watershed management area. This step is critical to effectively utilize the limited available funding.

5. Secure a Dedicated Funding Source and Project Specific Appropriations.

6. Integration of Various Watershed Efforts and Programs. There is a need to integrate all of these efforts into an efficient and focused framework.

7. Develop and Implement a Stakeholder Coordination and Involvement Plan. A stakeholder and public participation strategy coordination and involvement plan should be done at the critical and early stages of the formation of the plan. Identify key stakeholders whose input should be solicited early in the process and at critical stages of the watershed protection planning